Each of the Operator Services/Directory Assistance ("OS/DA") cost studies relies on output from the Operator Services Cost Model ("OSCM"). Mr. Klick corrected the OSCM to incorporate: (1) revised DMS-100 discounts, as described by AT&T switching expert Petzinger; (2) modified investments for urban DS0 and DS1 transport, as described by AT&T expert Turner; and (3) corrected "fill" factors for the MPX, ETMS, IVS and NAV computer systems. In conducting its cost studies, SWBT used actual utilization as "fill" factors in the computer systems included in the OSCM. Actual utilization is inappropriate because: (1) an efficient provider would not install significant excess capacity because computer expansion is relatively easy; (2) applying a fill factor on underutilized systems exponentially increases excess capacity; and (3) use of actual utilization violates the forwarding-looking requirements of LRIC. In correcting the SWBT utilization, Mr. Klick incorporated the administrative fill factors that SWBT provided for the computer systems. The "fill" factor issue on computer equipment also was incorporated into the revised Call Branding cost study - SWBT had again used actual utilization factors as fill factors. He corrected those factors by using the SWBT administrative fill.

Mr. Klick made two additional corrections to the OS/DA studies. First, he corrected labor rates; Mr. Rhinehart's testimony explains the problems inherent in SWBT's labor rate studies. Next, all costs associated with independent exchange carriers ("IECs") relations were excluded. An efficient provider would not incur these costs to provide OS/DA services to other independent exchange carriers unless the revenues generated would more than offset the costs. Because SWBT did not include any revenues from these services, the costs were excluded.

Mr. Klick's revised Operations Support Systems (OSS) cost study incorporated three corrections. He eliminated all computer systems costs (DATAGATE, OPTIVIEW, etc.) because they were already included by SWBT in the support assets factors. He eliminated labor hours because Mr. Rhinehart demonstrated that the labor hours associated with (a) remote access facility ongoing cost per port per month; (b) ongoing operational cost per month; and (c) the Helpdesk cost per month were already included in the support assets factor calculation or the common cost accounts. He also eliminated start-up costs because SWBT said it does not plan to charge CLECs for OSS development.

Mr. Klick identified the following necessary corrections to the LIDB Service Management System (SMS) cost study: (1) incorporation of the correct labor rates from Mr. Rhinehart; (2) elimination of inflation; and (3) elimination of certain equipment costs. The hardware costs for the LVAS and SLEUTH systems were eliminated to remove a SWBT double-count - they were already included within the SWBT support assets factor, as described by Mr. Rhinehart.

Mr. Klick identified two necessary corrections to the SWBT E911 cost studies: (1) revised labor rates (provided by Mr. Rhinehart); and (2) corrected equipment investments. SWBT used the Bellcore SCIS Intelligent Network (SCIS/IN) model to develop the E911 equipment investments. SCIS/IN incorporates output from the SCIS/MO model for its investments. Because SWBT used the wrong discounts in performing its local switching studies, it was necessary to rerun SCIS/IN to generate the investments for E911 that incorporated the correct

discounts.[7] SWBT also included costs in its E911 cost studies that were already recovered from their customers, thus double recovering these costs. Specifically, SWBT included NRCs for performing trunk translations. When a customer switches to a new LSP, there is no additional work for SWBT to perform. The SWBT study attempted to recover the costs from the customer as part of their service fee, and again from new entrants.[8]

The SWBT white pages study developed costs by three zones: rural, suburban and urban. There is no logical basis why paper or printing costs should vary by geographical groupings within Oklahoma. Additionally, the cost for an information page should be the same for any directory in the state. Mr. Klick's restatement (1) used SWBT's costs but applied them on a per listing basis; (2) eliminated the management fee that SWBT proposed to pay to its own subsidiary; (3) eliminated the commission assessment because that is inappropriate on third party transactions; and (4) eliminated the proposed inflation factor.

The Directory Assistance Listing cost study required two corrections: (1) the use of any inflation factor was eliminated and (2) the exchange carrier relations costs were eliminated because each LSP would also incur these costs.

The LSP Emergency Contact for Non-Published Service cost study required three adjustments (1) revised labor rates from Mr. Rhinehart; (2) elimination of inflation; and (3) elimination of exchange carrier relation costs because each LSP would also incur these costs providing this service to SWBT.

There are two other matters with respect to the Proposed Settlement Rates that should be brought to the Commission's attention. First, there are no cost studies or revisions to cost studies to support these rates. Second, the Proposed Settlement Rates are arbitrary. All that Cox, SWBT and Commission Staff did in establishing these rates is "split the difference" between the AT&T proposed rate and the SWBT proposed rate (with the exception of loop), take one-third off of the SWBT proposed NRC and eliminate almost all cross-connect rates. This arbitrary manner of picking rates "out of the air" does not comply with the cost-based standards applicable in these dockets.

**Summary of Cross-Examination of John C. Klick**

On questioning by the ALJ, Mr. Klick defended his opinion that the settlement rates are not cost-based by saying that one should evaluate both the

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[7] In its E911 studies, SWBT used an older version of SCIS/IN with lower discounts than what it used in its local switching studies.

[8] The E911 non-recurring charges that SWBT seeks to impose also creates a barrier to entry for potential new entrants. Based on its cost studies, this fee would be included when an LSP signs up its first customer and again each time the LSP expands its service area beyond the first E911 control point. While new entrants will be required to collect these special fees from end users, by law, they must be turned over to the agencies that respond to 911 calls.

inputs and the various assumptions in each of the cost models to decide item by item what is the appropriate input or assumption to be made for each separate issue. He stated that to arrive at proper cost-based rates, one should analyze and understand the inputs and assumptions presented by each party for each issue and decide which ones are appropriate. He conceded that the parties presented very different positions, but he thought that these positions could be evaluated as part of the decision process.

On cross-examination by SWBT, Mr. Klick restated his position saying that to arrive at proper rates, one needs to analyze the evidence being presented by all parties and make decisions about the cost study inputs and assumptions. Although he at first stated that the price for a specific unbundled element must be exactly equal to the cost for that element, he later conceded that there might be a range of permissible costs that could support a particular rate. He stated that the process of evaluating that range included decision points that are a result of evaluating the conflicting evidence and deciding what is the most reasonable approach. He conceded that two parties to the rate stipulations could disagree about cost-based rates but still agree on a compromise rate. He objected to what he saw as taking an average of the parties' positions to reach a compromise. He insisted that the process of selecting a rate in the middle of two divergent positions was not a cost-based process.

**4. Catherine Petzinger**

Ms. Petzinger of AT&T presented testimony regarding SWBT's switching cost studies. Based upon her review and analysis of SWBT cost studies, Ms. Petzinger concluded that SWBT used incorrect inputs and misused the outputs of the Switching Cost Information System to generate the basic switching investments used in its cost study for the minute of use and various port elements. Ms. Petzinger presented her criticisms of the SWBT cost studies and her proposals to rectify those problems.

**Incorrect switch prices were used as the foundation for all switching elements**

According to Ms. Petzinger, the most critical flaw in the switching studies is SWBT's entry of the incorrect discount input to the SCIS model. The SCIS/MO and SCIS/IN models contain vendor "list" prices and must be modified by a user-entered discount to reflect prices SWBT expects to pay for switches. This percent discount input should be calculated to reflect the long-run replacement switch prices that SWBT expects to pay. Because SWBT is currently in the process of renegotiating new contracts with its switch vendors to obtain better discounts. Ms. Petzinger explained why it would be inappropriate to use the historical contracts (which will shortly - if not already - be outdated) as the bases of computing the switch discount. Instead, Ms. Petzinger recommended, based upon her experience and publicly available information concerning switch prices. For large switches, the "Engineered, Furnished and Installed" (EF&I) price was $85/line, for medium sized switches, the price was $115 and for smaller switches, it was $140 per line.

In contrast, the discount inputs SWBT entered into SCIS produce an average cost per line of $142. In addition, the $142 per line is higher than other publicly available information about switch prices as shown below:

| Source | Price Per Line |
|---|---|
| NBI | ~$100 |
| Pacific Bell | $110 |
| Sprint Inputs to BCPM | ~$120 |
| SWBT Testimony | $85/115/140 |
| Nortel/US West | ~$68 |
| *SWBT UNE Cost Study* | **$142** |

Based upon her knowledge and experience of prices currently available in the market, Ms. Petzinger proposed a switch discount of **78.7%** for the Lucent switches and **83.9%** for the DMS-100. This results in an average price per line of **$104**, which does compare favorably to the publicly available information shown above. Given SWBT's current negotiations with Lucent and Nortel, Ms. Petzinger explained it is reasonable to expect its switch prices to decline below these prices. Therefore, using the discount proposed by Ms. Petzinger as a very conservative application; the Commission could certainly justify setting a higher discount.

The primary difference between SWBT's calculated discount inputs and the discounts proposed by Ms. Petzinger results from SWBT's use of a melded new switch price and growth switch price. SWBT has taken an initial switch discount and added growth lines over the alleged life of the switch (9 years) to that discount and determined an average melded discount taking into account the growth lines. SWBT has selectively chosen to include forecasted growth impacts on switch prices, while not including forecasted growth in demand, which would offset the potentially higher prices. The melding methodology conflicts with SWBT's own description of how it performs a switching cost study where it states unequivocally that it sizes the switch "to serve existing demand" - *not* demand over the life of the switch. Including impacts of growth only where it conveniently increases unbundled element prices is opportunistic and should be rejected. If SWBT has decided to perform full life-cycle costing including both forecasted costs and revenues, they should be required to be consistent and perform these much more complicated studies for all of the unbundled elements.

**Feature Hardware Additive**

The second major flaw in SWBT cost studies is related to SWBT's development of a feature related hardware additive that substantially inflates the switching minute of use cost. SCIS/MO and SCIS/IN compute trunk investments, which make up 69% of the feature hardware identified by SWBT. SWBT, however, chose not to use SCIS/IN to determine the costs for feature hardware, instead using an undocumented special study which is based upon historical embedded costs which are inappropriate in a forward looking LRIC study. The difference in results

between the special study and using SCIS is substantial. For example, SWBT's feature hardware study showed the cost of a trunk as $729, whereas SWBT's trunk port study that did use SCIS/IN was $258. When the SCIS discount input is corrected, the cost per trunk from SWBT's SCIS/IN program for the 5ESS switch is $157.61.

In addition to using SWBT's own SCIS/MO and SCIS/IN programs to calculate the investments for the feature hardware, Ms. Petzinger also broke the resulting hardware additives down into traffic sensitive and non-traffic sensitive hardware factors. Ms. Petzinger then applied the traffic sensitive additive to the minute of use element and the non traffic sensitive additive to the line port element.

**First Cost of Switch**

Ms. Petzinger recommend two corrections to SWBT's treatment of the first cost, or Getting Started Investment, of a switch.

- The first cost of the switch, or the Getting Started Cost, that is provided in the Bellcore model needs to be customized to reflect SWBT's local engineering practices. Specifically, she proposed changes to account for SWBT's centralized sparing policy. SCIS comes loaded with a full complement of spare components for each and every switch, assuming that centralized sparing is not available. When centralized sparing is used, then the investment in the components included in the GSI for each host and remote must be reduced. Ms. Petzinger conservatively conclude that the investment for the vender recommended default spare equipment be adjusted by 50%.

- The non-traffic sensitive first cost of switching should be allocated to, and recovered from, the non-traffic sensitive port element rather than the traffic sensitive minute of use element.

**Summary**

Ms. Petzinger made three major corrections to the SWBT studies:

- Corrected the discount input to SCIS
- Corrected the feature hardware additives
- Reassigned the getting started cost to the line port

The discount corrections impact every switching unbundled element[9], and all the elements have been recalculated to reflect the correction. This includes the digital trunk ports and tandem switching, as well as the line port and minute of use elements. The feature hardware additive correction and the reassignment of the getting started cost to the line port affect only the line port and local minute of use switching unbundled elements.

It is critical to note that comparing SWBT line port rates to AT&T line port rates separately from the minute of use rates can be misleading. While it

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[9] Except the ISDN port element investments, which AT&T did not modify.

may appear that the port rates proposed by AT&T and those proposed by SWBT are not materially different, the Commission should bear in mind that we have reassigned the large getting started switching investment from the minute of use element to the port element.[10] This reassignment resulted in substantially increasing the port and reducing the minute of use. Thus, if the Commission is inclined to make any adjustments to the proposals made by AT&T, Ms. Petzinger urged the Commission to consider adjustments to the switch minute of use investments in tandem with adjustments to the port investments.

Although AT&T strongly urges that new switch pricing should be used, if the Commission decide to meld new and growth prices, then Ms. Petzinger also testified about the adjustments to SWBT's cost studies being proposed by Staff witnesses. Staff's proposed discount input adjustments generate a huge disparity in costs between the two switch technologies, which is inappropriate because the switch vendors are highly competitive in pricing equivalent switch technologies. Ms. Petzinger therefore recommend that the most cost-effective switch technology be used as the benchmark price of switching. The SCIS discount input for the other switch technology would be determined by iteratively running SCIS until the SCIS outputs match the benchmark. Ms. Petzinger also recommend that the 3% discount increase proposed by Staff for growth equipment also be applied to new switch equipment.

Staff proposed accepting SWBT's life-cycle costing methodology with modifications. Ms. Petzinger explained that the Staff's modifications need to be enhanced. Staff recommended using a melded investment of new and growth switch pricing over the *life of the switch*, but staff recommended "growing" the minute of use demand only over the *life of the arbitration agreement*. The time periods must match and therefore the minute of use demand should also be grown over the life of the switch. In addition, the number of ports must be "grown" as well as minute of use demand. Ms. Petzinger agreed with Staff's recommendation that the percentage of new vs. growth lines should be calculated by including the effects of timing the purchasing of lines based on cost optimization.

Although Staff agreed with AT&T that the getting started investment is more non-traffic sensitive, Ms. Petzinger disagreed with Staff's conclusion to not make any changes. AT&T's position is that an additional switch will be required when the number of lines exceed the capacity of the first switch. Therefore, there is a direct cost-causation relationship between lines and the getting started cost of a switch and accordingly, the getting started investment should be assigned to, and recovered by, the port element, rather than the minute of use element.

Ms. Petzinger responded to Staff's concern that AT&T did not adequately support our assertions that SWBT's feature hardware costs are seriously overstated. The differences between SWBT's two cost studies are so large that

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[10] The primary reason for the similar port element costs, despite our inclusion of the large getting started investment, is the discount input and feature hardware additive corrections.

it is obvious one of them is wrong. As an example, the trunk costs in SWBT's feature trunk hardware study, which represent 70% of the costs in question, are more than three times higher than the trunk equipment in SWBT's trunk port study. Ms. Petzinger explained that she did not arbitrarily choose the least-cost cost study; rather, she determined that the appropriate cost is the one generated by the same cost models that SWBT used for every other switching cost used in these studies. She also explain why the separate feature hardware study methodology SWBT used could generate radically different costs than the SCIS programs used by SWBT for all of the other costs in the switching cost studies. It is essential that the feature hardware costs be recalculated using SWBT's own SCIS programs.

Finally, Ms. Petzinger reviewed the portion of the rates contained in the proposed settlement between SWBT, Cox and Staff relating to Switching (the "Proposed Settlement Rates"). The proposed settlement rates do not represent cost based rates which satisfy either the Oklahoma costing rules (OAC 165:55-17-25 and OAC 165:55-17-27) or the relevant provisions of the Telecommunications Act of 1996. The proposed settlement rates do not incorporate all of the changes which are necessary in order to render SWBT's cost studies compliant with the Act and the Oklahoma costing rules as outlined in my testimony. Indeed, the proposed settlement rates do not even incorporate or represent the changes and recommendations of Commission Staff consultants and, therefore, cannot be cost-based in my opinion even based upon the recommendations of Staff's own consultant. Ms. Petzinger urged the Commission not to adopt these rates.

**Summary of Cross-Examination of Catherine Petzinger**

The ALJ questioned Ms. Petzinger concerning the wide range of cost data that had been presented by the various parties in the cause, and particularly the underlying wide differences of opinion concerning that data. He specifically asked about what made the stipulated rates less reasonable or less cost-based than those presented by any specific party. The witness responded that the disparity was based on the different inputs used in the assumptions of the respective parties. She also offered the opinion that the stipulated rates would be more favorable to Cox than to AT&T because Cox's facilities are primarily in downtown business areas.

On cross-examination by Cox, Ms. Petzinger admitted that she was unfamiliar with Cox's facilities and that she didn't really know what facilities Cox maintained or how they were deployed. The witness further stated that she was unfamiliar with Cox's business plan for future competition.

Cox next questioned Ms. Petzinger concerning her conclusion that the rates in the stipulation are not cost-based. She stated that AT&T's proposed rates were cost-based and that SWBT's were not. She indicated that AT&T would accept only minor differences from their proposed rates and that rates that diverged dramatically from the AT&T proposals should not be considered cost-based according to the Oklahoma cost rules.

Ms. Petzinger admitted that AT&T uses at least two different cost models, both of which resulted in what AT&T believes to be cost-based rates. She also admitted that different inputs into cost models can produce different costs.

On cross-examination by SWBT, Ms. Petzinger was unable to justify her conclusion that the stipulated rates were not in compliance with the Telecommunications Act nor with the Oklahoma pricing rules. She expressed unfamiliarity with the standards by which the stipulated rates should be judged and admitted that she was relying on information provided her by Mr. Flappan, another AT&T witness. She could not say whether a reasonable rate for unbundled network elements might include a reasonable profit. She did admit that the ALJ should be able to review different efficient technologies and evaluate the logical arguments proposed by the various parties in this proceeding to try to determine what would be the forward-looking technology based on the issues raised and the testimony submitted in the hearing.

**5. Daniel P. Rhinehart**

Mr. Rhinehart is a District Manager - Government Affairs with AT&T. He holds BS and MBA degrees and has performed analysis of telecommunications costs since 1980. He demonstrated that the SWBT cost methods and inputs are flawed in many respects, frequently resulting in over-recovery or double recovery of costs by SWBT in its cost studies.

Mr. Rhinehart sponsored the restatement of SWBT's cost factors to correct them for errors in inputs or computations. He used the BELLCORE CAPCOST model used by SWBT to determine capital cost factors of depreciation, cost of money and taxes. Mr. Rhinehart's CAPCOST inputs are based on depreciation parameters which, in SWBT's words, are "prescribed by the OCC." These parameters originated in June, 1997 annual depreciation update negotiations between the OCC staff, FCC staff, and SWBT. He based his capital cost factors on a proposed AT&T-SWBT stipulation rate of return of 10.0%.

Mr. Rhinehart analyzed SWBT Support Asset Factors and concluded that SWBT's inclusion of support asset costs, such as land, buildings, general purpose computers, and motor vehicles, in both labor rates and recurring cost studies lead to significant double recovery of costs in some instances. He proposed that loaded labor rates for certain groups of employees exclude support asset costs because appropriate recovery of these costs is included in recurring cost studies and should not be double-recovered through labor-rate based non-recurring charges. He also identified instances where SWBT's cost studies include specific support asset costs (e.g., general purpose computers) while the generalized support assets factors include these costs as well. A downward adjustment should be made to the support assets factors. The alternative is to eliminate the double-counted computers from their specific cost studies.

Mr. Rhinehart demonstrated, and SWBT has agreed, that the equipment maintenance factors developed by SWBT incorporate SWBT's embedded customer-generated non-recurring service order activity. To avoid including SWBT's internal non-recurring costs in LRIC recurring rates for unbundled elements, he proposed a downward adjustment to SWBT's maintenance factors based on independent analyses. He also proposed a small downward adjustment to SWBT's proposed equipment maintenance factors to account for the lesser amount of testing expense expected in the future as former SWBT functions are assumed by new entrants on behalf of their customers. Finally, because SWBT did not support its proposed

factor, Mr. Rhinehart proposed a revised maintenance factor for General Purpose Computers based on data provided by SWBT in this cause.

SWBT's power equipment factor for General Purpose Computers is unsupported and should be eliminated from SWBT cost studies for fear that the factor double-counts computer investments. SWBT's proposed building investment factor is flawed because it does not conform to LRIC principles. Mr. Rhinehart proposed adjustments to include radio equipment in its computation and to account for prospective colocation space use by new entrants.

SWBT's inclusion of inflation in its cost studies is incorrect. Mr. Rhinehart testified that SWBT's claim that their cost studies capture expected productivity gains is patently false. He recommended that all inflation factors be eliminated from SWBT's cost studies.

Mr. Rhinehart evaluated SWBT's common cost computations and recommend six substantive changes. First, SWBT's 1995 point-in-time factor should be adjusted downward to reflect the known and measurable SWBT's long-term downward trend in common costs. Second, SWBT's common costs should be adjusted downward to correct for the disproportionate assignment of corporate overheads to Oklahoma. Third, there should be a minor downward adjustment to reflect expected economies of scale being achieved through the SBC-Pacific Telesis merger. Fourth, Mr. Rhinehart added some support asset costs inadvertently excluded by SWBT. Fifth, the common cost factor should be computed as a proportion of revenues instead SWBT's method which is based on expenses. The fifth adjustment is necessary to match the computation of the common cost factor to its application. Specifically, LRIC costs include expenses and profit. A common cost factor established as a proportion of expenses only will be overstated. Finally, while SWBT used the principles as well, Mr. Rhinehart extended the concept of avoided retail costs into more portions of the common cost factor development. Mr. Rhinehart recommended a common cost factor is 10.46%.

Mr. Rhinehart developed revised loaded labor rates for use in SWBT's recurring and non-recurring cost studies. As discussed in the paragraph on support assets above, support asset costs are accounted for in recurring cost studies and in labor-rate based non-recurring cost studies. The inappropriate double-count is best eliminated through exclusion of support asset costs from loaded labor rates linked to network assets. Separately, Mr. Rhinehart opposed SWBT's use of multiple support assets factors in loaded labor rates for operator services management and non-management personnel. Instead, only one support assets factor should be used for all such labor rates. Mr. Rhinehart also opposed the inclusion of sales commissions in the development of loaded labor rates for unbundled network elements as SWBT does not pay commissions to its employees for sales to new entrants. Finally, Mr. Rhinehart proposed that SWBT not be permitted to impose differential overtime and premium time labor rates for Time and Materials Charges and Maintenance of Service Charges because all labor rates proposed by SWBT include average overtime and premium time pay allowances.

In his rebuttal testimony, Mr. Rhinehart took issue with the Commission Staff Consultant conclusion that two AT&T-proposed adjustments to SWBT's common cost factor should not be adopted. Mr. Rhinehart quantitatively demonstrated the disparity of expense assignment to Oklahoma of executive, planning, general and

administrative costs and questioned why costs generally incurred on a corporate level should be assigned to the states in a disproportionate manner. He defended his proposed Telesis Merger common cost adjustment by providing evidence that SWBT has entered into contracts with Pacific Bell Communications for certain administrative functions, the costs of which would have been recorded in SWBT's common cost accounts.

Mr. Rhinehart allayed the Staff's fears that AT&T's proposal to eliminate the support assets factor from certain loaded labor rates went too far were misplaced. Support asset costs for non-network-related functions remain fully recoverable through appropriate labor rates and through the common cost factor.

Finally, Mr. Rhinehart provided clarification regarding overtime and premium time labor rates in SWBT's Time and Materials cost study. SWBT's proposed exclusion of the premium time factor from the development of the applicable labor rates was inappropriate because all labor rates in SWBT's studies include an allowance for overtime and premium time. He recommended the use of the standard loaded labor rates (as adjusted by AT&T) for all cost studies where labor times are used.

Finally, Mr. Rhinehart reviewed the portion of the rates contained in the proposed settlement between SWBT, Cox Communications and Commission Staff relating to Cost Factors (the "Proposed Settlement Rates"). The proposed settlement rates do not represent cost based rates which satisfy either the Oklahoma costing rules (OAC 165:55-17-25 and OAC 165:55-17-27) or the relevant provisions of the Telecommunications Act of 1996. A simple average of the AT&T and SWBT recurring rates cannot possibly reflect the selection of inputs that would be used to determine a fully cost-based set of rates. The proposed settlement rates do not incorporate all of the changes which are necessary in order to render SWBT's cost studies compliant with the Act and the Oklahoma costing rules as outlined in my testimony. The proposed settlement does not take into account the changes proposed by Mr. Rhinehart with which SWBT agreed. Indeed, the proposed settlement rates do not even incorporate or represent the changes and recommendations of Commission Staff consultants and, therefore, cannot be cost-based even based upon the recommendations of Commission Staff's own consultant. The Commission should not adopt these rates.

**Summary of Cross-Examination of Daniel P. Rhinehart**

On questioning by the ALJ, Mr. Rhinehart stated that inputs to the cost studies have very, very critical effects on the outputs. He mentioned four specific factors that alone affect the total costs and total rates by approximately 25%. He was unable to state whether AT&T could compete under the rates proposed by the stipulation.

Under cross-examination by Cox, Mr. Rhinehart first stated that AT&T's proposed rates are the only cost-based rates presented in the cause. Unless the Commission adopts AT&T's proposed rates in total, it has not complied with the LRIC standards, in his opinion.

Nonetheless, he conceded that costing is not an exact science, that some element of judgment is involved, that estimating is required and that costs for

future periods must be analyzed. He also conceded that AT&T does not now know what the inflation factors will be in future years under the Interconnection Agreement with SWBT. He conceded that reasonable judgments of what inflation might be in the future will differ, and that the cost derived from those estimates will differ also.

Mr. Rhinehart also conceded that the cost of capital is an input in the costing process and that AT&T had agreed to a compromise cost of capital of 10% which was different from the cost initially proposed by AT&T. Nevertheless, he considers the 10% stipulated rate to be cost-based and forward-looking, satisfying the standards of the Federal Act.

He declined to agree that only those compromises to which AT&T agrees with will satisfy LRIC standards. He stated that there are some judgments involved with determining costs.

**6. Leo D. Segura**

Mr. Segura is a Technical Manager for AT&T. In his testimony, he demonstrated that, according to LRIC principles, as well as provisions of the Telecommunications Act of 1996, prices as outlined throughout the SWBT cost studies, are inflated by the use of manual activities, embedded technologies and processes, and use of labor rates which are inconsistent with the activity being performed. In addition, these studies assume manual processes for ordering service which are not forward looking and serve to drive up the cost of service, and extend provisioning intervals, for the Local Service providers.

SWBT's cost studies give little consideration for forward looking, efficient systems and processes. Under LRIC principles, costing for Total Service Resale (TSR) and unbundled network elements (UNE), must be based on forward looking, efficient Operating Support Systems (OSSs), and clean up-to-date databases, which reduce the incidence of manual intervention, and enhance the opportunity to flow through service orders for UNE and TSR. In addition, forward looking and efficient network technologies are to be considered in order to maximize efficiencies and improve the ability to provision, and maintain, service on a flow through basis, consistent with industry standards and best business practices.

There are four fundamental problems with the cost studies as proposed by SWBT:

1. The processes and technologies, as assumed by SWBT, foster manual service order input and manual cross connecting of service. In the case of ordering service, SWBT's studies assume that manual processing of the LSP's order will be the process of choice. In addition, technologies such as Universal Digital Loop Carrier instead of Integrated Digital Loop Carrier are assumed in SWBT cost studies. Neither of these assumptions foster flow through provisioning and maintenance. Rather, utilizing these methods and technologies only serves to drive up the cost of service, and prohibit efficient provisioning and maintenance of service. By utilizing the efficiencies of

forward looking technology and processes, the cost of manual intervention, increased fallout, and longer maintenance activities can be avoided. Since the majority of activities related to ordering, provisioning, and maintaining of service will be taken on by the LSP, the high costs of NRCs and costs to the customer, can be minimized.

2. A second problem with SWBT studies is related to the Loop/Port combination. In these studies, SWBT assumes that the new entrant will gain access to the local digital switch via an intermediate toll frame. This assumption is incorrect in that this toll frame, from an interconnection standpoint, is not required. In fact, this intermediate frame serves only to drive up the cost by requiring additional manual cross connects, which otherwise could be remotely provisioned utilizing forward looking processes and technology in the same manner in which SWBT provisions it's own services.

3. The third problem with the SWBT NRC studies is the recovery of Installation and Maintenance (I&M) costs. When a new entrant purchases a loop, the I&M costs associated with this installation are already included in recurring cost of purchasing the service. Charging a NRC for I&M would constitute a double recovery. In addition, AT&T's NRC costs related to loop facilities assume that dedicated inside plant (DIP) and dedicated outside plant (DOP) will be utilized. AT&T's NRC model assumes that a totally new loop to the customer location would not be put in place for the new entrant. Thus, the cost of reusing existing DIP and DOP, which have already been installed, tested , and provisioned once, would not be recovered again.

4. The fourth major problem with SWBT's cost studies is that the information as provided is insufficient to support their proposed NRCs. Documentation as to work activities, level of technician performing the work, and accurate time estimates have not been provided. Many of the processes and activities are "present method of operation" and do not take into consideration a " future method of operation" utilizing forward looking technologies and processes for accepting and provisioning service orders. Without the use of an electronic interface, Digital Cross-connect Systems (DCS), and IDLC, the use of costly manual processes will continue.

The NRCs as developed by SWBT take into consideration processes and mechanisms which change little from their present mode of operation. For the new entrant this mode of operation will drive the cost of providing service higher, and will most assuredly lengthen provisioning intervals and maintenance repair times. By not taking these considerations into account, the high cost of NRCs would make entry cost prohibitive for the CLEC, and block competition in the local arena. The citizens of Oklahoma stand to suffer.

Finally, Mr. Segura reviewed the portion of the rates contained in the proposed settlement between SWBT, Cox and Staff relating to Non-Recurring Charges. The proposed settlement rates do not represent cost based rates which satisfy either the Oklahoma costing rules (OAC 165:55-17-25 and OAC 165:55-17-27) or the relevant provisions of the Telecommunications Act of 1996. There is no cost basis to simply lop off one-third of SWBT's non-recurring rates without adjusting at the inputs. The proposed settlement rates do not incorporate all of the changes which are necessary in order to render SWBT's cost studies compliant with the Act and the Oklahoma costing rules as outlined in Mr. Segura's testimony. Indeed, the proposed settlement rates do not even incorporate or represent the changes and recommendations of Staff consultants and, therefore, cannot be cost-based even based upon the recommendations of Staff's own consultant. The Commission should not adopt these rates.

**Summary of Cross-Examination of Leo D. Segura**

Although Mr. Segura was presented for the purpose of supporting adjustments that AT&T made to SWBT's non-recurring cost studies, he demonstrated on cross-examination that he was generally unfamiliar with SWBT's network and the manner in which it operates. He also referred repeatedly to "experts" on an AT&T non-recurring cost team that provided the input for many of these adjustments, but who were not presented for cross-examination at the hearing. He could not explain dramatic differences between assumptions made by AT&T about SWBT's network and contrary testimony by SWBT network witnesses. AT&T simply applied national default values derived by the AT&T team of "experts." These values formed the basis for AT&T's adjustments to the SWBT non-recurring cost studies. Mr. Segura could generally not relate those adjustments to actual experience on the SWBT network. He has never worked on AT&T's team of experts although he worked with the team in developing numerous NRC inputs.

Mr. Segura stated that in the cost study adjustments that he was sponsoring at the hearing, he presented only technical input and only on three types of elements that he could remember. The actual costing presented by AT&T was provided by others, not by Mr. Segura. He provided input on travel costs, cross-connects and digital cross-connect systems. The travel inputs that he provided were for travel in the field.

Mr. Segura provided no technical input to AT&T's proposed adjustments to the loop cost-study. Furthermore, he conceded that he had not installed local loops as part of his background except for coordinating installation of a private line type loop going out to customer locations through central offices; the actual installation of that type loop was done by the local exchange company. Although he represented that he had some experience maintaining a local loop, he conceded that if an error was found in that loop, it was the local company that went out to fix it. Mr. Segura has performed testing on local loops himself.

SWBT called to Mr. Segura's attention that portion of his testimony in which he purports to critique SWBT's cost studies as to its compliance with the applicable pricing and costing standards under the Federal Act and the Oklahoma rules. He was unable to support the conclusory statements in his testimony that SWBT costs do not reflect "least cost most efficient technology," nor was he able

to quote a definition of those terms. Mr. Segura did define the terms from a technological standpoint.

With respect to SWBT's OSS systems covered by Mr. Segura's testimony, he conceded that he had no experience developing, maintaining, installing or running OSS systems. He had not used any of the OSS systems now deployed by SWBT other than the TIRKS system. Mr. Segura was unsure of exactly how many OSS systems SWBT now has. He has not reviewed the technical manuals on those OSS systems. He has not visited LEC offices to see how UNE orders would come in for processing.

One of Mr. Segura's objections to SWBT's cost studies is that they provide for manual activities in an environment where, in his opinion, electronic interfaces for ordering services should be used. He stated that he provided technical support for the AT&T position that SWBT's OSS systems would experience a 98% flow-through with respect to unbundled network elements. Nevertheless, he had no knowledge of what interface AT&T proposed to use or might be developing for use with SWBT's OSS systems. He demonstrated limited knowledge of SWBT's existing systems, aside fomr SOAC and SORD. He could not explain the difference between AT&T's 98% flow through assumption and testimony that SWBT often experiences dramatically lower flow-through in its own processes, but he pointed to the testimony of Ms. Ham in Texas where she admitted SWBT achieved a 99% flow through, and has compared flow through rates for other LECs using legacy OSS systems. He was unable to identify any carrier that had experienced 98% flow-through on SWBT's system, and he was unable to specify AT&T's flow-through for ordering non-residential services.

Mr. Segura could not substantiate his assumption that AT&T's national default values were specifically applicable to Oklahoma, but he did state that AT&T's national NRC model did assume legacy oOSS systems, and that SWBT claims to be a leader in OSS technology. He stated that AT&T had assumed these values would apply, but he could point to no method or manner to validate the application of those assumptions to Oklahoma. In any event, there were several areas in which the assumptions of AT&T were dramatically different from the testimony of SWBT with respect to the actual network. For example, Mr. Segura "understood" that SWBT has 100% IDLC and that DCS is in place in Oklahoma. He conceded that his assumptions on OSS flow-through are considerably different from the testimony by Ms. Ham as to the actual SWBT experience.

Mr. Segura stated that AT&T assumes that when it orders UNEs that Dedicated Inside Plant (DIP) and Dedicated Outside Plant (DOP) will be in place and utilized. He could not explain the difference between this assumption and Mr. Deere's testimony that DIP and DOP cannot be assumed to be in place. Although Mr. Segura insisted that DIP and DOP were in place, he could not state a basis for his belief and admitted that he had not inspected SWBT's network to determine whether Mr. Deere's testimony is incorrect. Furthermore, he had no idea what the cost would be to achieve 100% DIP and DOP if SWBT were not already operating at that level.

Mr. Segura's testimony relating to the dispatch times for technicians to go out to the field was based on AT&T's national model default values and on his personal experience. Similarly, with respect to translation times, Mr. Segura

admitted that he has never done translation activities for switching and has not looked at the manuals or the technical publications for translations and switches. He simply applied the national default values to these activities to determine the time for each activity.

For example, Mr. Segura referred to AT&T's assumptions that cross-connects would take two minutes each. This assumption was not the basis of any documented study, such as a time and motion study, for cross-connects. The two-minute assumption was based solely on Mr. Segura's opinion and that of other AT&T personnel not testifying at the hearing. Mr. Segura conceded that he had no experience doing cross-connects other than on manual or analog frames.

Mr. Segura conceded that he has never reviewed any of SWBT's technical manuals. Nevertheless, he conceded that it would have been easy to validate the assumptions AT&T made concerning the national default standards by looking at SWBT's technical manuals. He further conceded that he had not reviewed every Bellcore document cited in support of his testimony.

Mr. Segura stated that by eliminating the cross-connect between the loop and the port, the AT&T cost studies were essentially assuming that a loop port combination would be requested. Nevertheless, he was unable to say whether a loop port combination rate was proposed by AT&T and he conceded that he had not seen a cost study for such a combination. He further conceded that a loop port combination would come at some cost but that no such cost was reflected in AT&T's non-recurring cost study. Because AT&T was assuming that the cross-connect was already in place, it eliminated any non-recurring cost of the cross-connect. Nevertheless, Mr. Segura conceded that there would be a cost for installing the cross-connect and that that cost could be modeled and recovered. He could not recall whether the national default models proposed a cost for that cross-connect.

**7. Steven E. Turner**

Mr. Steve Turner testified on behalf of AT&T. In his testimony, he stated his criticisms of the cost studies presented by SWBT in the area of common and dedicated transport and related areas. In addition, Mr. Turner set forth his recommendations to rectify these problems.

**I. SUMMARY OF MR. TURNER'S CRITICISMS OF SWBT COST STUDIES**

**A. Dedicated Transport**

With the Dedicated Transport studies, SWBT failed to include the entirety of circuits as defined in the arbitrated AT&T Interconnection Agreement. This omission of all of the relevant components was the first step in preventing SWBT from performing a LRIC study on Dedicated Transport. SWBT further compounded the problem by using out-of-date ring designs. The ring designs determine the number of nodes on each ring in SWBT's SONET networks. However, SWBT has failed to include any of the "stacked rings" within its network for purposes of the cost studies. This omission has led to an overstatement in cost because SWBT has failed to include those "stacked rings" within its network which would be optimized for high traffic volumes within its metropolitan networks. Further,

SWBT's Dedicated Transport cost studies are riddled with problems where SWBT cost analysts did not even adhere to their own cost study procedures. SWBT, based on the service codes to be included in the cost studies, should have included all of the dedicated access transport purchased by IXCs. However, the reality is that SWBT failed to consistently include these circuits in the cost study.

Unrealistic and low actual fill factors are applied throughout SWBT's cost studies in a blatant attempt to significantly overstate the LRIC of the unbundled elements. The 49.44% fill factor for SONET terminal equipment in no way reflects the scalability available to SWBT with this technology. In fact, even SWBT's cost analysts have admitted that their application of the 49.44% factor to the "low speed" side of the SONET terminal equipment was erroneous and that a much higher fill factor should be used in these cost studies. Further, SWBT has identified the objective fill factors that should be used for Dedicated Transport cost studies, but has inappropriately chosen not to use these factors when developing the costs for Dedicated Transport circuits.

**B. Common Transport**

The methodology whereby SWBT developed its Common Transport cost study is directly affected by the results of the Dedicated Transport cost studies. SWBT has taken the DS1 Dedicated Transport cost study as the input into the Common Transport cost study. The modifications to SWBT's DS1 Dedicated Transport cost study must be carried over to the Common Transport cost study.

**C. DCS Functionality and Multiplexing**

As related to the DCS Cost Study, SWBT incorrectly calculated the DS1 capacity for the DCS thereby considerably overstating the costs of the DS1 DCS Port and the DS0 DCS Port. It made a similar error in calculating the DS0 capacity of the D4 Channel Bank used in calculating the DS0 DCS Port investment. What is unusual about these errors is that many other areas of SWBT's Dedicated Transport and Multiplexing cost studies, SWBT correctly calculates these same investments.

As related to the Multiplexing Cost Study, SWBT makes the error of double-counting the Sales Tax Factor and Power Investment Factor on various investments included in the cost study. Further, SWBT did not account for the method through which the CLEC will be purchasing and using the Multiplexing element in establishing the fill factor consequently leading to an overstatement of investment.

**D. Cross Connects**

Briefly, with the exception of loop cross connects with testing, all of the investments SWBT has included in the Cross Connect cost studies are either redundant of investments captured in the elements being cross connected or are totally unnecessary.

**E. Signaling Octets per Call Calculation**

There are two primary concerns with SWBT's calculations of the signaling octets per call. First, SWBT used data from Baltimore, Maryland to determine its call distribution. These call distributions do not in any way reflect those that SWBT, itself, has told AT&T in negotiations that it experiences in Oklahoma. Second, SWBT has made an enormously poor assumption regarding the feature penetration for Caller ID with Name Delivery that it would be 100 percent in Oklahoma which in no way reflects the current or expected penetration for this feature.

## II. SUMMARY OF THE CORRECTIONS TO SWBT's COST STUDIES PROPOSED BY MR. TURNER

### A. Dedicated Transport

#### 1. Complete inclusion of Dedicated Transport circuit demand and an update SONET ring inventory.

A LRIC study must include all elements of demand so that the study can capture and include all relevant economies of scale. Conservatively, SWBT likely has excluded as much as 80 percent of the qualifying dedicated transport circuits as defined in the AT&T Interconnection Agreement. By SWBT omitting such a large portion of the dedicated transport demand, the CLECs have been precluded from gaining the economies of scale required for a LRIC study.

The use of an updated inventory of SWBT's SONET rings is important for the Dedicated Transport cost studies as well. First, there are inconsistencies between the ring inventory which comes from either 1994 or 1995 and the circuit inventory that comes from 1996. As a result of these inconsistencies, SWBT excludes valid and important circuit data that diminishes the opportunity for CLECs to receive the scale economies SWBT itself enjoys. Second, SWBT has acknowledged the use of an engineering concept known as "stacked rings" for its SONET networks. Whereas this is an efficient means through which to engineer Dedicated Transport, SWBT has explained that the existence of these "stacked rings" is *not* reflected in the ring inventory. This omission prevents AT&T from assessing the efficiency of SWBT's engineering of its SONET network and again prevents CLECs from receiving the scale economies that exist in SWBT's network.

To correct these problems, SWBT should be required to provide data to account for all of the circuits that meet the arbitrated definition of interoffice dedicated transport and provide an updated and complete inventory of the SONET Rings within SWBTs network. This data could then be used to calculate the rates for interoffice dedicated transport.

SWBT's failure to include all of the circuits and all of the rings in its cost studies results in overestimating the cost of transport relative to accurate estimates of LRIC. Primarily, the omissions cause economies of scale to be missing from the study. Additionally, the costs are overestimated because they are not studied using efficient network design. Prices based on overstated costs are discriminatory, which is contrary to the Federal Act.

There is no way for AT&T to correct these problems without SWBT's help. Although Mr. Turner gives examples throughout his testimony to illustrate the scope and significance of the missing circuits, there is no way for AT&T to *systematically* generate the circuits that are missing. SWBT would have to generate a new data set based on all of the circuits within its network. AT&T made multiple efforts to acquire this information from SWBT, but was unsuccessful.

However, the solutions summarized below reflect changes that Mr. Turner testified he was able to readily make in SWBT's cost studies and significantly lessen the gap between SWBT's cost estimate for Dedicated Transport and the actual LRIC. Regardless of whether this Commission orders SWBT to produce all of the circuits within its network for a new run through COSTPROG, the following changes should be instituted.

**2. Fill factors must be corrected to account for forward-looking cost studies.**

The Commission should order a terminal equipment fill factor of 0.85 for use in the transport cost studies. This fill factor reflects three important points: *First*, SWBT, by its own admission, believes that the objective (forward-looking) fill factor for its terminal equipment is 0.85 for fixed investment and 0.92 for plug-in investment. Although SWBT has the ability to apply both of these values to the appropriate investments inside of COSTPROG, Mr. Turner conservatively requested that this Commission adopt SWBT's 0.85 factor to be used in the Dedicated Transport cost studies. *Second,* much of the terminal equipment is scalable. *Third,* when total demand is taken into account, SWBT uses stacked rings for many routes. These last two factors support the use of high objective fill factors.

SWBT should be required to use a fill factor of 0.85 for the fiber investment in Dedicated Transport. This is SWBT's own objective (forward-looking) fill factor for fiber investment. When conducting LRIC cost studies, the forward-looking aspect of this cost methodology requires that an objective fill factor be used as opposed to actual (regardless or whether the actual fill is higher or lower than the objective fill).

**3. DS3-DS1 Correction Factor should be implemented to adjust for SWBT incorrectly weighting the DS3 Dedicated Transport Cost Study with DS1 circuit counts.**

Again, as Mr. Turner outlined earlier, SWBT went to the unusual step of weighting the cross sections in the DS3 Dedicated Transport cost study with its DS1 circuit counts. What is more, where SWBT did not identify any DS3s in a cross section, it still developed the cost of a DS3 but weighted it with a DS1 circuit count only. To correct this erroneous weighting of DS3 cross section costs with DS1 circuit counts, Mr. Turner underwent a three-step process. First, he matched up each cross section in the DS1 cost study with the DS3 cost study. Second, he took the circuit count in the DS3 cost study and subtracted from it the circuit count in the DS1 cost study. Last, he divided the remaining circuits in the DS3 cost study by 28 (number of DS1s in a DS3). This yielded the number

of DS3s in SWBT's cost study. My revised DS3 Dedicated Transport cost study is only weighted with DS3s.

There is one other related concern. In the Interzone DS3 Dedicated Transport Cost Study, SWBT failed to include the actual DS3 circuit counts even using its flawed weighting mechanism. The net effect was that this further exacerbated the weighting problem SWBT has created in the Interzone DS3 cost study in that the actual DS3s received virtually no weighting. Mr. Turner has also corrected this error in his restatement and this largely contributes to the significant DS3-DS1 correction factor for interzone DS3 circuits.

**4. Roundup Correction Factors should be applied to account for SWBT rounding up to the nearest mile.**

Currently, the Interconnection Agreement between AT&T and SWBT calls for dedicated transport mileage to be rounded up to the next nearest whole-mile. SWBT has not developed its costs in such a way as to reflect the rounding error that is inherent when SWBT always rounds up. Consequently, if SWBT will not agree to drop this provision in the Interconnection Agreement, the dedicated transport cost estimates should be adjusted downward to reflect the rounding error in SWBT's methodology. Otherwise, rates based upon always rounding up will be discriminatory.

**B. Common Transport**

Because SWBT used the DS1 Dedicated Transport cost study output as its primary input into the Common Transport cost study, the changes that are discussed above for the Dedicated Transport cost studies (with the exception of the DS3 only modification for the weighting problem) also apply in the Common Transport cost study.

**C. DCS Functionality and Multiplexing**

Two simple changes must be made for DCS Functionality to account for SWBT's understatement associated with the DS1 capacity of a DCS and the DS0 capacity of a D4 Channel Bank. SWBT needs to increase the DS1 capacity for the DCS to 28,672 to be consistent with the remainder of SWBT's Dedicated Transport cost studies and accurately reflect the investment and capacity associated with a DS1 port on a DCS. This modification must be reflected in both the DS1 DCS Port investment and the DS0 DCS Port investment. Further, SWBT needs to increase the DS0 capacity for the D4 Channel Bank to 288 DS0s to be consistent with the remainder of SWBT's DS0 Dedicated Transport Cost Study and the DS1-DS0 Multiplexing Cost Study. SWBT's own investment worksheet explicitly states that the capacity of a D4 Channel Bank as used by SWBT is 288 DS0s. This capacity should be used by SWBT.

There are two simple changes that must be made to SWBT's Multiplexing Cost Study to bring it into conformance with LRIC principles. First, the Sales Tax Factor and Power Investment Factor should only be applied in one place in a properly conducted cost study. Second, when CLECs purchase DS1 multiplexing, they purchase the entire DS1-worth of multiplexing. If the new entrant only uses 3 of the available 24 DS0s on the multiplexer, this low level of utilization and

its cost effects are fully borne by the CLEC. The same holds true for DS3 to DS1 multiplexing. Because CLECs are purchasing 100 percent of DS1-DS0 and DS3-DS1 multiplexing, the appropriate fill factor in this cost study is 1.00.

D. Cross Connects

SWBT divided the investment and recurring costs for cross connects into three areas: IDF, testing, and equipment. The IDF investment is entirely unnecessary to provide connections between collocation cages and SWBT's MDF or DSX, as appropriate. Further, placing an IDF between the MDF or DSX and the collocation cage inserts an additional point of failure and can complicate maintenance between AT&T and SWBT. In short, this investment and the recurring cost should be removed from the cost of cross connects. Additionally, the equipment SWBT is including in the Cross Connect cost studies is redundant of equipment that has already been captured in the elements that are being cross connected. The addition of this investment in the cross connect enables SWBT to double-recover its costs, is discriminatory, and does not comply with LRIC principles.

E. Entrance Facilities

AT&T and SWBT arbitrated a definition for Dedicated Transport that clearly includes wire centers owned by AT&T, which means transport to AT&T POPs would be part of this definition. From a technical standpoint, the SWBT facilities that are necessary to provide Dedicated Transport to the AT&T POP are already collocated in the AT&T POP and are the same type of facilities as are included in SWBT's Dedicated Transport cost study.

Entrance Facilities are nothing more than loops that terminate into Dedicated Transport. AT&T and SWBT are in this docket working to determine the appropriate rate for unbundled loops. Once these loop prices are determined, there will be no restrictions that would prevent the unbundled loop from being terminated in Dedicated Transport. Again by definition, unbundled loops go to customer premises which do not include AT&T wire centers. SWBT should not be permitted to add Entrance Facility charges to its Dedicated Transport rates. If AT&T needs access to facilities to a customer's premises, then AT&T will order unbundled loops.

SWBT set the precedent for not charging Entrance Facility charges in SONET based Dedicated Transport. SWBT offers a service called Survivable Transport Network ("STN"). The STN tariff enables telecommunications companies to purchase dedicated DS3s on SONET rings that are defined by the company. The company must specify at least one of its own wire centers as being on the ring for the termination of the dedicated transport. In this tariff there are no entrance facility charges and, by way of comparison, the rate per month per DS3 under this tariff approaches $800.

There could be one exception when Entrance Facilities should apply. If the Dedicated Transport that was ordered by the CLEC went from a SWBT wire center to a CLEC wire center that was not on a SWBT ring, then the assets that would be used to establish this facility could resemble those included in the Entrance

Facility Cost Study. Only in this situation would an Entrance Facility charge apply and this would need to clearly ordered by this Commission.

Mr. Turner also responded to some of the testimony of Commission Staff on the issue of Entrance Facilities. Mr. Turner pointed out that Dr. Paul P. Hlavac provides testimony regarding Dedicated Transport in which he outlines his support of SWBT being permitted to impose Entrance Facility charges in addition to the Dedicated Transport rates. Dr. Hlavac believes that the Interconnection Agreement between AT&T and SWBT does address Entrance Facilities as a rate element. Further, Dr. Hlavac asserts that "the concept of entrance facilities has existed for a long time in the telecommunications industry." Mr. Turner's testimony shows that neither a passing reference to a "SWBT proposal" for Entrance Facilities in an Interconnection Agreement nor the fact that tariffs for Entrance Facilities have been around for a long time are sufficient grounds for this Commission to permit SWBT to recover Entrance Facility charges for all forms of Dedicated Transport. Further, Dr. Hlavac explains that he believes Entrance Facility charges should apply regardless of whether the location to which the transport is being delivered (e.g., an AT&T POP) is on a SWBT SONET ring or not. Mr. Turner's testimony explains in detail why, with modern SONET technology, Entrance Facility charges should not apply when the AT&T wire center is a node on SWBT's SONET network because there is simply no additional cost for providing dedicated transport in such a situation.

Mr. Turner does acknowledge that there are exceptions where Entrance Facility charges could apply. He agreed with Dr. Hlavac that for DS1 Entrance Facilities, the correct Entrance Facility rate "should be devised using parameters as prescribed in the loop cost study." This cannot be the case for DS3 Entrance Facilities for these two reasons which Mr. Turner explained in the rebuttal testimony: (1) SWBT has not conducted anything approaching a valid loop cost study for DS3 Entrance Facilities; and (2) SWBT assumes for the DS3 Entrance Facility cost study that the Local Service Provide (LSP) wire center is always on a SWBT SONET ring. Consequently, Mr. Turner demonstrated that, with such an assumption, DS3 Entrance Facility charges should never apply to DS3 Dedicated Transport.

Mr. Turner's testimony confirmed that, except in very limited circumstances, SWBT should not be permitted to levy Entrance Facility charges on LSPs purchasing unbundled Dedicated Transport. This is because, in most instances, SWBT will not need to deploy Entrance Facilities in order to provide Dedicated Transport and, therefore, there is no additional cost to recover. For example, where an LSP switch is located on SWBT's SONET network, SWBT can and will provide Dedicated Transport without deploying Entrance Facilities (which are comprised of Loops). There are circumstances, however, where the LSP switch is not attached to SWBT's SONET equipment where SWBT might be required to deploy Entrance Facilities to provide transport. This is, however, the only circumstance where Entrance Facility charges should apply. Mr. Turner further explained that even this limited circumstance will provide an opening for SWBT to implement technology in its network that is inferior to what it currently deploys and will deliver substantially inferior service to LSPs and customers in Oklahoma. However, given that there can be a limited circumstance when an Entrance Facility rate element can apply to Dedicated Transport, Mr. Turner merely commented on the adequacy of SWBT's currently proposed rates and charges.

In short, Mr. Turner showed that the rates and charges SWBT is currently proposing for the DS3 and DS1 Entrance Facilities are not consistent with the LRIC cost methodology applicable in Oklahoma.

F. Signaling Octets per Call Calculation

As a general rule, SWBT should be required to use Oklahoma-specific (rather than Baltimore-specific) data for calculating the signaling octets per call. First, SWBT should be required to use the number its has shared with AT&T in negotiations of 40 percent for distribution of intraoffice calls. Second, SWBT should be required to utilize an Oklahoma specific value for the percentage of interLATA traffic that is direct trunked versus tandem trunked. My estimate for this distribution is that 90 percent of the interLATA traffic is direct trunked and 10 percent is tandem trunked. Finally, SWBT should be required to use its own feature penetration rate for Caller ID with Name Delivery (which will be considerably lower than Caller ID by itself) rather than assuming that AT&T and other CLECs will give the feature (and presumably the terminal equipment) away for free.

G. Optical Dedicated Transport

Because SWBT did not provide cost studies for Optical Dedicated Transport (OC3, OC12, and OC48), it was incumbent upon AT&T to provide such a study. Mr. Turner created three studies. In developing these studies, he relied exclusively on input already provided by SWBT either in COSTPROG or with the equipment pricing. In short, he provided Optical Dedicated Transport costs that were as consistent as possible with the underlying approach and equipment prices SWBT would use in developing costs.

III. THE COMMISSION SHOULD NOT APPROVE THE COX/SWBT SETTLEMENT

Finally, Mr. Turner explained that he reviewed the portion of the rates contained in the proposed settlement between SWBT, Cox and Staff relating to Transport and Cross Connects. The proposed settlement rates do not represent cost based rates which satisfy either the Oklahoma costing rules (OAC 165:55-17-25 and OAC 165:55-17-27) or the relevant provisions of the Telecommunications Act of 1996. The proposed settlement rates do not incorporate all of the changes which Mr. Turner submits are necessary in order to render SWBT's cost studies compliant with the Act and the Oklahoma costing rules as outlined in his testimony. The proposed settlement rates do not even incorporate or represent the changes and recommendations of Staff consultants and, therefore, cannot be cost-based even based upon the recommendations of Staff's own consultant. Mr. Turner also pointed out that there is no evidence from which one could conclude that these settlement rates incorporate all of the changes to its cost studies which SWBT has admitted should be made (e.g., to fill factors) to render those studies compliant with the Oklahoma cost rule and the Act. Finally, Mr. Turner explained that he was familiar with the competitive rates for transport that are generally available in the Oklahoma market today. The proposed settlement rates greatly exceed the competitive rates available in Oklahoma. Based upon these observations, Mr. Turner urged the Commission not to accept or approve the proposed settlement rates.

**Summary of Cross-Examination of Steven E. Turner**

On cross examination by Southwestern Bell, Mr. Turner first stated that rates produced in this docket would need to be "close to" those presented by AT&T in order to be considered cost-based. However, he conceded that cost-based rates could be set at a level which deviated from those proposed by AT&T. He stated that the Commission could evaluate all of the inputs presented by the different parties and conclude that there are legitimate inputs that the parties differ on. He said AT&T may not agree with that decision but that it would not be an arbitrary decision as to what the rates should be. It would be based on cost.

He also agreed that where there are disagreements on inputs between witnesses for Southwestern Bell, Cox and AT&T, then the Commission could resolve those issues and determine a rate which is fair and reasonable. He reiterated that AT&T's cost numbers were not the only correct cost-based numbers.

Mr. Turner confirmed that cost data presented by the parties has covered a variety of input items which are in dispute. The purpose of the hearing, in his estimation, was for each side to present their respective versions of cost-based inputs so the Judge could make a decision and recommend that decision to the Commission. The process of presenting these inputs at the hearing would "create a record of what the cost-base rates were." Mr. Turner explained that one of his criticisms of the proposed settlement was that it provided no traceability bck to inputs and in no way reflects an evaluation of the cost basis for that rate. Mr. Turner also compared the various proposed rates with certain competitive rates with which he was familiar, but did not tie any of this comparison to costs.

**8. Marshall R. Adair**

Mr. Adair is employed by AT&T as a Manager in AT&T's Network and Computing Services Division. His responsibilities include reviewing and analyzing local exchange carrier tariffs, filings and cost studies. The purpose of his testimony is to present AT&T's non-recurring cost (NRC) studies and results for the Oklahoma cost proceedings.

AT&T submitted, consistent with Oklahoma Rule 165:55-17-25, Forward Looking Long Run Incremental Costs as a basis for setting prices in this proceeding. The cost studies and results sponsored are for those costs which are non-recurring in nature.

Due to a negotiated agreement with SWBT in this proceeding, AT&T used SWBT's cost modeling process for non-recurring costs. AT&T took the non-recurring costs proposed by SWBT in its various cost studies and adjusted the inputs upon which those costs are based to reflect a forward looking least cost most efficient environment.

Using SWBT's filed paper copies of its NRC cost studies, which consist of a series of EXCEL spreadsheets, AT&T duplicated the spreadsheets and the formulae within the spreadsheets which link the input figures to the results figures.

AT&T witness, Mr. Leo Segura, provided the input revisions to the AT&T NRC cost studies for Oklahoma. Mr. Segura's information regarding appropriate inputs is derived from multiple sources. Specifically, AT&T's nationally developed NRC Model, contained the relevant information for appropriate inputs to NRC studies. The AT&T Model (and its inputs) was developed by a team of industry experts utilizing a combination of industry expertise as well as time and motion studies. This team of industry experts includes numerous AT&T personnel with many years of experience in the local telephone industry. This experience includes years of work for various Regional Bell Operating Companies.

Using the inputs supplied by Mr. Segura and the spreadsheets which replicate SWBTs cost methodology, Mr. Adair developed the NRCs proposed by AT&T in this docket. The following is a list of the Long Run Incremental Cost ("LRIC") NRC studies being sponsored by AT&T in Cause Nos. 97-213 and 97-442, respectively:

PUD 97-213

Unbundled Network Interface Device
Unbundled dB Loss Conditioning
Unbundled Local Loop (and work papers)
Unbundled Network Component Loop Cross Connect
Unbundled Network Component Port Cross Connect
Unbundled Analog Line-Side Port
Unbundled Basic Rate Interface Port
Unbundled Primary Rate Interface Port
Manual Call Trace
2-Wire Analog Trunk Port (DID)
Unbundled Digital DS1 Trunk Port
Unbundled Basic Rate Interface Port Features
Unbundled Primary Rate Interface Port Features
Unbundled Local Switching Features
Unbundled Local Switching Centrex-Like Features - Analog
Unbundled Local Switching Centrex-Like Features - ISDN
Unbundled Dedicated Transport
Unbundled LSP to SS7 STP
Signal Transfer Point (STP) Port
LIDB SMS
Unbundled Service Order
Maintenance of Service
Time and Material
Direct Inward Dialing (DID)
Channelized DS1
Dark Fiber Cross Connect
Interoffice Transport DS1
Interoffice Transport DS3
Interoffice Transport Voice Grade
Digital Cross Connect Systems
Basic Rate Interface (CSV/CSD)

LSP Simple Service Conversion
LSP Complex Service Conversion
Shared DA and DACC

Finally, Mr. Adair reviewed the portion of the rates contained in the proposed settlement between SWBT, Cox and Staff relating to Non-Recurring Charges. The proposed settlement rates do not represent cost based rates which satisfy either the Oklahoma costing rules (OAC 165:55-17-25 and OAC 165:55-17-27) or the relevant provisions of the Telecommunications Act of 1996. The proposed settlement rates do not incorporate all of the changes which are necessary in order to render SWBT's cost studies compliant with the Act and the Oklahoma costing rules as outlined in Mr. Adair's testimony. Indeed, the proposed settlement rates do not even incorporate or represent the changes and recommendations of Staff consultants and, therefore, cannot be cost-based even based upon the recommendations of Staff's own consultant. The Commission should not adopt these rates.

9. **Richard B. Lee**

Mr. Lee is Vice President of the economic consulting firm of Snavely King Majoros O'Connor & Lee, Inc. Mr. Lee demonstrated that the projection lives proposed by the staff of the FCC and adopted by the OCC last year are appropriate for use in LRIC calculations. He also demonstrated that the lives proposed by SWBT are far too short for use in LRIC calculations and would result in appropriately high costs for unbundled network elements.

LRIC calculations require the use of forward-looking economic lives for plant facilities. Since 1980 the FCC has had as its goal the prescription of forward-looking lives based upon company plans, technological developments and other future-oriented analyses. From Mr. Lee's personal experience as AT&T Regulatory Vice President - Financial and Accounting Matters, he can affirm that the FCC's prescriptions are, indeed, forward-looking. Prior to divestiture, he directed the preparation and presentation of all Bell Operating Company depreciation filings before the FCC, including those of SWBT. From 1984 to 1990, he was responsible for AT&T Communications depreciation filings.

Mr. Lee provided empirical evidence of the FCC's forward-looking orientation. The depreciation reserve percent for all LECs has risen from 18.7 percent in 1980 to 47.1 percent in 1996. Similarly, the depreciation reserve percent for SWBT has risen from 36.5 percent in 1990 to 46.4 percent in 1996. SWBT's depreciation rates have averaged 6.4 percent over the last seven years, while its retirement rates have averaged only 3.3 percent. Lastly, the FCC's prescribed lives for most major accounts are significantly shorter than recent actual life indications.

SWBT's proposed lives are consistent with those it uses for external financial reporting. The FCC has rejected the use of financial book lives for regulatory purposes. The FCC has long recognized that financial book lives are governed by the GAAP principle of "conservatism," which causes them to be biased on the short side.